

1. A brush suitable for use in facilitating cleaning of a passageway defined by a medical device, the brush comprising:

- (a) an atraumatic tip having proximal and distal ends;
- (b) a fill wire having proximal and distal ends and including a fill section, said distal end of said fill wire being connected to said proximal end of said atraumatic tip;
- (c) a shaft having proximal and distal ends, said distal end of said shaft being connected to said proximal end of said fill wire;
- (d) an inner sheath covering a portion of said fill wire; and
- (e) an outer sheath covering at least said inner sheath and a portion of said shaft.

2. The brush as recited in claim 1, wherein said fill wire comprises a plurality of braided wires.

3. The brush as recited in claim 1, further comprising a bulb disposed about a portion of said atraumatic tip.

4. The brush as recited in claim 1, further comprising proximal and distal connector sleeves, at least a portion of said proximal end of said fill wire and at least a portion of said distal end of said shaft being received and retained in said proximal connector sleeve, and at least a portion of said distal end of said fill wire and at least a portion of said proximal end of said atraumatic tip being received and retained in said distal connector sleeve.

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5. The brush as recited in claim 1, wherein at least said shaft is substantially composed of a memory alloy.

6. The brush as recited in claim 5, wherein said memory alloy comprises a nickel-titanium alloy.

7. The brush as recited in claim 1, wherein said atraumatic tip comprises a core wire and a coil, said coil being disposed about said core wire and bonded thereto.

8. The brush as recited in claim 7, wherein at least said coil is substantially composed of a radio-opaque material.

9. The brush as recited in claim 8, wherein said coil comprises gold-plated tungsten.

10. The brush as recited in claim 7, wherein said core wire is substantially composed of a memory alloy.

11. The brush as recited in claim 10, wherein said memory alloy comprises a nickel-titanium alloy.

12. A brush suitable for use in facilitating cleaning of a passageway defined by a medical device, the brush comprising:

- (a) a shaft;
- (b) means for transmitting a cleaning force exerted upon said shaft; and
- (c) an outer sheath covering at least a portion of said shaft.

13. The brush as recited in claim 12, wherein said means for transmitting a cleaning force comprises a fill wire joined to said shaft, and an atraumatic tip joined to said fill wire.

14. The brush as recited in claim 13, further comprising an inner sheath covering a portion of said fill wire.

15. The brush as recited in claim 12, wherein at least said shaft is substantially composed of NiTiNOL.

16. A system suitable for use in conjunction with performance of medical procedures, the system comprising:

- (a) a medical device defining at least one passageway; and
- (b) a brush configured to be at least partially received within said at least one passageway defined by said medical device, said brush comprising:
  - (i) an atraumatic tip having proximal and distal ends;
  - (ii) a fill wire having proximal and distal ends and including a fill section, said distal end of said fill wire being connected to said proximal end of said atraumatic tip;
  - (iii) a shaft having proximal and distal ends, said distal end of said shaft being connected to said proximal end of said fill wire;
  - (iv) an inner sheath covering a portion of said fill wire; and
  - (v) an outer sheath covering at least said inner sheath and a portion of said shaft.

17. The system as recited in claim 16, wherein said medical device is selected from the group consisting of: hemodialysis tubes, catheters, feeding tubes, parenteral nutrition tubes, gastric catheters, drainage tubes, and venous lines.

18. The system as recited in claim 16, wherein said fill wire comprises a plurality of braided wires.

19. The system as recited in claim 16, wherein at least said shaft is substantially composed of a memory alloy.

20. The system as recited in claim 16, further comprising proximal and distal connector sleeves, at least a portion of said proximal end of said fill wire and at least a portion of said distal end of said shaft being received and retained in said proximal connector sleeve, and at least a portion of said distal end of said fill wire and at least a portion of said proximal end of said atraumatic tip being received and retained in said distal connector sleeve.

21. The system as recited in claim 16, wherein at least said shaft is substantially composed of a memory alloy.

22. The system as recited in claim 16, wherein said atraumatic tip comprises a core wire and a coil, said coil being disposed about said core wire and bonded thereto.

23. The system as recited in claim 22, wherein at least said core wire is substantially composed of a memory alloy.

24. The system as recited in claim 22, wherein at least said coil is substantially composed of a radio-opaque material.

25. A brush suitable for use in facilitating cleaning of a passageway defined by a medical device, the brush comprising:

- (a) an atraumatic tip having proximal and distal ends and including a core wire and a coil, said coil being disposed about said core wire and bonded thereto, and said atraumatic tip including a bulb disposed about said distal end;
- (b) a fill wire comprising a plurality of braided wires and having proximal and distal ends, and said fill wire including a fill section;
- (c) a distal connector sleeve, at least a portion of said distal end of said fill wire and at least a portion of said proximal end of said atraumatic tip being received and retained in said distal connector sleeve, and said distal connector sleeve being bonded to said coil;
- (d) a shaft having proximal and distal ends;
- (e) a proximal connector sleeve, at least a portion of said proximal end of said fill wire and at least a portion of said distal end of said shaft being received and retained in said proximal connector sleeve;
- (f) an inner sheath covering a portion of said fill wire; and
- (g) an outer sheath covering at least said inner sheath, said proximal connector sleeve, and a portion of said shaft.

26. The brush as recited in claim 25, wherein at least said coil is substantially composed of gold-plated tungsten.

27. The brush as recited in claim 25, wherein at least said core wire is substantially composed of NiTiNOL.

28. The brush as recited in claim 25, wherein at least said shaft is substantially composed of NiTiNOL.

29. The brush as recited in claim 25, wherein said plurality of braided wires are substantially composed of stainless steel.

30. The brush as recited in claim 25, wherein said proximal and distal connector sleeves are substantially composed of stainless steel.

31. The brush as recited in claim 25, wherein said bulb is substantially composed of epoxy.

32. The brush as recited in claim 25, wherein at least said inner sheath is substantially composed of polytetrafluoroethylene.

33. The brush as recited in claim 25, wherein at least said outer sheath is substantially composed of polytetrafluoroethylene.

34. The brush as recited in claim 25, wherein said core wire is tapered.

35. The brush as recited in claim 25, wherein said fill section is tapered.